

Success Stories – Siting Renewable Energy on Contaminated Land

Pemaco Superfund Site, Maywood, California

Solar Panels Power Onsite Soil and Ground Water Treatment System



Site Description

The 1.4-acre Pemaco Superfund site is located on the banks of the Los Angeles River, in a mixed industrial and residential neighborhood in Maywood, California. The City of Maywood now owns the Pemaco property and has rezoned it from industrial to recreational use. The city is in the process of building the 7.3-acre Maywood Riverfront Park (MRP) on six properties surrounding, and including, the Pemaco Superfund Site.



Property History

Pemaco began onsite chemical mixing operations in the late 1940s. Pemaco was then purchased by the LUX Chemical Company on July 27, 1988, and abandoned on June 21, 1991. In December 1993, the facility burned to the ground. Although the fire completely destroyed the warehouse, six 55-gallon drums, several above-ground storage tanks, and 31 underground storage tanks remained on the site.

The site is contaminated with high levels of volatile organic compounds (VOCs) in the soil beneath the site. The ground water beneath the site was also contaminated with VOCs including: perchloroethylene (PCE), trichloroethylene (TCE), trichloroethane (TCA), dichloroethane (DCA) and vinyl chloride (VC). On January 1, 1999, the site was placed on the National Priorities List of Superfund sites. To clean up soil and ground water contamination at the site, EPA began construction in 1998 of an onsite treatment system that incorporated multiple technologies including ERH and heat-enhanced bioremediation in the DNAPL source area and combinations of dual-phase extraction, ground water pump and treat/containment, bioremediation, and monitored natural attenuation for other contaminated zones.

Renewable Energy Development

EPA Region 9 completed construction of the onsite ground water treatment system in the summer of 2006. In July 2007, an Xantrax Grid Tie Solar Inverter photovoltaic (PV) system was installed on the remediation facilities building to help power remediation equipment used to clean up the soil and ground water contamination at the site. The installation of the solar PV system was the first pilot project of the EPA Region 9 Cleanup – Clean Air Initiative, designed to facilitate reduction of diesel and greenhouse gas emissions at Superfund cleanup and redevelopment sites. After applying a \$9,000 rebate, the net cost of the system was \$21,000. As of July 2008 (after one year of operation) the solar PV system generated 6,172 kilowatt-hours per year, an annual electricity savings of \$2,839. In addition, the system is estimated to have prevented the emission of 3.3 tons of carbon dioxide into the atmosphere, emissions comparable to 7,600 vehicle miles per year.

QUICK FACTS:

Location:	EPA Region 9, Maywood, CA
Property Size:	1.4 Acres
Site Ownership:	Local Government - City of Maywood, CA
Former Use:	Custom chemical blender 1950-1991
Contaminants:	Petroleum hydrocarbons; volatile organic compounds; chlorinated hydrocarbons
Project Type:	Superfund—Clean Air Initiative
Type of RE:	Solar PV
Project Cost:	\$30,227
Key Partners:	City of Maywood, CA
Current Status:	Installation of Solar PV system completed July 7, 2007

PROJECT HIGHLIGHTS:

- The installation of the solar PV system represents the first pilot project of EPA's new Cleanup - Clean Air Initiative. (<http://epa.gov/region09/cleanup-clean-air>)
- By July 2008—after one year of operation—the solar PV system generated 6,172 kilowatt-hours, an annual savings of \$2,839 on electricity costs.
- The solar PV system results in the avoidance of 3.3 tons of CO₂ into the atmosphere each year, equivalent to the emissions generated by 7,600 vehicle miles.



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To learn more about siting renewable energy on contaminated land, visit: www.epa.gov/renewableenergyland